ABSTRACT

TRANSPORT REFRIGERATION UNIT WITH COMPRESSOR WITH CAPACITY MODULATION

A refrigeration system includes a high-pressure side scroll compressor having a primary suction port and an intermediate suction port, an evaporator having an inlet and an outlet, a primary compressor inlet flow path fluidly coupling the outlet of the evaporator with both the primary suction port and the intermediate suction port, and a control valve operable to direct a flow of fluid moving along the primary compressor inlet flow path to at least one of the primary suction port to the intermediate suction port in response to a mode of operation of the refrigeration system. A capacity of the compressor associated with the primary suction port is greater than a capacity of the compressor associated with the intermediate suction port.

[Figure 2]